

Attorney Docket No. 05045/LH

**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE**

Applicant(s) : Yasuhiro KOMIYA et al

Serial No. : 10/521,778

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For : IMAGE PROCESSING SYSTEM

Art Unit : 2624

Examiner : Mia M. Thomas

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SIR :

Review of the Rejection in the above-identified application is respectfully requested. No amendments are being filed with this request, and this request is being timely filed with a Notice of Appeal.

The review is requested for the reasons set forth on the following five pages of explanation.

R E M A R K S

An Office Action was issued on February 12, 2009. This Pre-Appeal Brief Request for Review is being filed to request review of, in particular, (1) the rejection under 35 USC 103 of independent claim 23 in view of the combination of USP 6,856,354 ("Ohsawa"), US 2004/0076921 ("Gofman et al"), USP 5,523,786 ("Parulski"), and USP 5,051,823 ("Cooper et al"), and (2) the rejection under 35 USC 103 of independent claim 42 in view of the combination of USP 6,201,880 ("Elbaum et al"), Gofman et al, Cooper et al, and Ohsawa.

Gofman et al and Cooper et al completely fail to disclose or even remotely suggest the features of claims 23 and 42 that the Examiner asserts they disclose. Accordingly, it is respectfully requested that this panel withdraw the rejections of claims 23 and 42 and the claims depending therefrom.¹

Gofman et al relates to the light-emitting tool used by (for example) dentists to cure compounds such as those used in teeth fillings. (See, for example, Fig. 10 and the background section of Gofman et al.) The invention of Gofman et al is to provide a curing light that has multiple light sources whose light is integrated into a single output light beam. The result is a single output beam with a broader spectral width than the light produced by any individual one of the light sources. The output light beam is thereby capable of curing a variety of dental compounds. (See, for example, the abstract and paragraphs [0010]-[0012] , [0027] and [0030]-[0036] of Gofman et al.) Gofman et al, naturally, relates only to emitting light. And it is respectfully pointed out

¹ The current versions of claims 23 and 42 are set forth in the Amendment filed on November 5, 2008. Claim 42 incorporates all of claim 23.

that the curing-light-emitting tool of Gofman et al does not capture an image of the subject being illuminated by the curing light, and that this reference does not at all suggest such a use.

Nevertheless, the Examiner asserts that Gofman et al discloses “an image pickup optical system which forms a subject image of a subject illuminated by the light-emitting devices.” (See pages 3 and 13 of the Office Action.) This assertion is completely unsupported by the disclosure in Gofman et al. Gofman et al discloses emitting curing light, not obtaining a subject image of a subject illuminated by emitted light. The Examiner points to paragraph [0037] of Gofman et al for support. This paragraph, however, describes the optical system that guides light from LEDs to a subject. See paragraph [0037], lines 3-10 of Gofman et al:

[A] fiber optic cable assembly 26 . . . receives light produced by individual LEDs 22 at input surfaces 33, and conducts light to a transmitting surface 34, to be re-directed to input surface 35 of fiber optic light guide 37. Light is directed by conventional light guide 37 to transmitting surface 36 for application, for example, to polymerize a dental composite resin. (Emphasis added)

Contrary to the Examiner’s assertion on page 3 of the Office Action, paragraph [0037] of Gofman et al clearly does not disclose “an image pickup system which forms a subject image of a subject illuminated by the light emitting devices” as recited in claim 23. With respect to the same structure of claim 42, the Examiner further relies on paragraphs [0038], [0043], and [0044] of Gofman et al. These paragraphs, however, like the rest of Gofman et al, merely relate to light emission. Contrary to the Examiner’s assertions, Gofman et al does not disclose an image pickup system which forms a subject image of a subject illuminated by the light emitting devices” as recited in claims 23 and 42.

As the Examiner appears to recognize, Gofman et al does not disclose or suggest performing lighting control of the LEDs to, for example, sequentially light-on light emitting devices as in the spectroscopic image capturing mode recited in claims 23 and 42. Indeed, the invention of Gofman et al lies in simultaneously emitting light from a plurality of light sources and combining the light from the light sources to produce a light beam that can be used to cure a variety of compounds. (See, for example, the abstract and paragraphs [0012] and [0030] of Gofman et al.)

The Examiner has cited Cooper et al as disclosing the spectroscopic image capturing mode and the moving image capturing mode of claims 23 and 42. Cooper et al discloses a dental instrument including a laser device (for treatment, not illumination - see column 2, lines 57-59 of Cooper et al) and an electronic video camera (see, for example, the Summary of the Invention in columns 2 and 3 of Cooper et al). And Cooper et al discloses that the instrument may include light sources for illuminating the area to be viewed (see, for example, column 2, lines 63-65, column 3, line 66 to column 4, line 3, and 7, lines 61-65 of Cooper et al.) It is respectfully pointed out, however, that Cooper et al does not at all disclose or suggest the spectroscopic image capturing mode or the moving image capture mode of claims 23 and 42.

According to claims 23 and 42, the control unit controls the photographing apparatus to capture images in one of a spectroscopic image capturing mode and a moving image capturing mode, selectively. Claims 23 and 42 recite:

wherein in the spectroscopic image capturing mode, the control unit controls the plurality of light-emitting devices, which are selected according to the characteristics of the spectroscopic distributions of the light emitting devices, to sequentially light-on, and the control unit controls the image pick-up device unit to capture sequential spectroscopic still images of the subject simultaneously with the sequential lighting-on of the light-emitting devices; and

wherein in the moving image capture mode, the control unit one of: (i) controls a single specific primary color or a plurality of specific primary colors of the light-emitting devices selected from the plurality of light emitting devices to sequentially or simultaneously light-on, and controls the image pick-up device unit to capture a moving image while the specific primary color of the light-emitting devices are lighted-on, and (ii) controls a plurality of groups of the light-emitting devices to sequentially light-on group by group, the groups including a group of the light-emitting devices that belong to blue in the visible light range, a group of the light-emitting devices that belong to green in the visible light range, and a group of the light-emitting devices that belong to red in the visible light range, and controls the image pick-up device unit to capture a moving image while the groups of the light-emitting devices are sequentially lighted-on.

See claim 23, lines 16-41, and claim 42, lines 16-39 in the Amendment filed on November 5, 2008.

With respect to these features of claims 23 and 42, the Examiner cites this portion of Cooper et al:

As a feature of one embodiment of this invention, the handle of the dental camera includes means for communicating all appropriate signals and fluids to and from the camera head and the laser light emission port, and, if desired, valves and switching means located on the handle for controlling such communication.

(Column 2, line 65 to column 3, line 3 of Cooper et al.) See the top of page 5 of the Office Action and the bottom of page 14 of the Office Action.

This cited portion of Cooper et al bears no relation to the spectroscopic image capturing mode and the moving image capturing mode of claims 23 and 42. And it is respectfully submitted that Cooper et al does not at all disclose or suggest controlling a plurality of light-emitting devices and an image pick-up device unit to achieve the spectroscopic image capturing mode and moving image capturing mode of claims 23 and 42.

Thus, Gofman et al and Cooper et al clearly fail to disclose or suggest features of claims 23 and 42 for which they have been cited. And it is respectfully submitted that even if the cited references were combinable as suggested by the Examiner, the resultant combination would not achieve or suggest the features of the present invention as recited in claims 23 and 42 whereby a control unit controls a photographing apparatus to capture images in one of a spectroscopic image capturing mode and a moving image capturing mode, selectively.

In view of the foregoing, it is respectfully requested that the rejections under 35 USC 103 of independent claims 23 and 42 and the claims depending therefrom be withdrawn.

Respectfully submitted,

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